

# (Theme: On the Path to Sustainable Energy)

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## Summary:

Middle East Biomass 2016 is the platform to gain or share the knowledge in the new technological developments in the field of chemical engineering. This conference brings together professors, researchers, and practitioners in all the areas of biomass and provides an international forum for the spreading of approved research results, new ideas and practical developments. We are honoured to invite you all to attend and register for the “Global Summit and Expo on Biomass (Euro Middle East Biomass 2016) which is going to be held during October 10-12, 2016 Dubai, UAE.

The organizing committee is gearing up for an exciting and informative conference program including plenary lectures, symposia, workshops on a variety of topics, poster presentations and various programs for participants from all over the world. We invite you to join us at the Middle East Biomass 2016, where you will be sure to have a meaningful experience with scholars from around the world. All members of the Middle East Biomass 2016 organizing committee look forward to meeting you in Dubai UAE.

## Importance & Scope:

Biomass is regarded as a most important renewable source of energy because it can be used as an alternative source for energy production. Natural sources for energy production are becoming extinct day by day. The main reason behind biomass energy production is that it can be produced from wood, plant and animal wastes, forestry wastes which indicate that biomass can be produced from those materials that are regarded as wasted materials which are again re-used and energy is produced. Biomass does not emit any harmful gases, produces clean energy, abundant and renewable, and reduces the usage of fossil fuels for energy production and also it can be used to create different products. The main reason behind biomass usage is it reduces emission of greenhouse gases.

Usage of biomass will grow within the coming years. The clean electricity generation will be enough for more than 17,000 UAE householders a year and the usage of renewable for electricity generation in UK is increased by 60 per cent and the share of electricity is around 9.7 per cent in 2012 and 15.5 per cent in 2013. Around 3.9 million tonnes of biomass, mostly in the form of woodchips and pellets, were burnt to generate electricity during those 12 months. One tonne of pellets translates into two tonnes of greenwood. Usage of biomass will grow exponentially within coming years. The market value of

electricity generated from biomass in the United States was over \$45 billion in 2011. About 70% of all biomass in the world is used in the residential sector. 14% is used in industry and 11% is transformed into electricity, heat, or energy such as liquid fuel or biogas.

## Why Dubai???

UAE history dates back to 5,500 BC, with the first known habitation of the area. Archeological evidence suggests those earliest inhabitants engaged in trade with their neighbor's – a trait that remains vital to the country's identity today. For two and a half millennia, the Gulf coast has been a crossroads of the world. From the Persian Royal Road to the Han Dynasty's Silk Road, from the trading posts of the 19th century to the hypermodernity of today's UAE, people have always converged here. They come not only to do business but also to share ideas, experience and inspiration. The Middle East has for thousands of years been a meeting point of religions, culture's and trade routes, but the newer states of the United Arab Emirates have in recent years acquired growing importance as an academic hub at the crossroads of Africa and Asia, Europe as well as of the US, with the building of a number of universities and satellite campuses. The UAE enjoys a strategic location on the new Southern Silk Road between Asia, Africa and Europe, a situation that provides optimum trading conditions and means the UAE is poised to take advantage of economic activity among the world's fastest growing and developing economies as part of the 'South-South' trade trajectory. Thousands of Chinese businesses use Dubai as a hub for Africa. Indian traders use the emirate to access the world. Latin American 'multi-Latinas' see Dubai as a launch pad into South Asia. Western multi-nationals use Dubai as a hub for the Middle East. Dubai is both a unique trans-continental trade hub and a nexus for innovation in the fields of technology, culture and the wider knowledge economy.

Dubai has recently attracted world attention through many innovative large construction projects and sports events. The city has become symbolic for its skyscrapers and high-rise buildings, in particular the world's tallest building, the Burj Khalifa. In addition, Dubai is home to other ambitious development projects including man-made islands, hotels, and some of the largest shopping malls in the region and the world. Dubai International Airport leads Paris, Hong Kong and London as the world's busiest in terms of international passengers. Last year more than 70.4 million people passed through its terminals, and it has the highest footfall of any international airport in 2015. Dubai's flag carrier, Emirates Airline, is also on track to become the biggest in the world while Dubai ranks sixth globally measured by air cargo traffic. The UAE continues to develop in areas ranging from environmental engineering to software development, and from film production to biotechnology. The country has the highest percentage of female high-school graduates who enroll in university anywhere in the world.

## **Why to attend?**

Middle East Biomass-2016 mainly focuses on usage of biomass energy as an alternative source for energy production for future generation and aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results. Middle East Biomass-2016 aims to promote various researches on biomass among scientists, academia and industries.

With the presence of highly affiliated personalities, researchers, scientists around the globe focused on biomass energy production, this conference is providing the platform for learning and sharing the new developments in this field. This is the place to meet the current and potential speakers and receive the name recognition.

## **Market for Biomass**

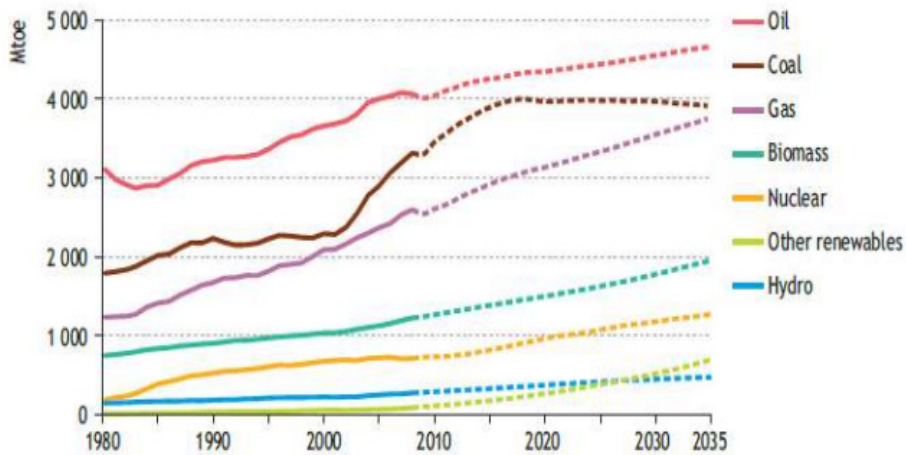
From 2010 to 2015, the global biomass manufacturing market is projected to increase from \$572.9 billion to \$693.7 billion, according to the latest issue of EL Insights. This represents a compound annual growth rate (CAGR) of 3.9% during this time period

Over the years to come, biomass will grow within the biopower, biofuels, and bioproduct sectors. The market value of electricity generated from biomass in the U.S. was \$45 billion in 2010 and will increase to \$53 billion by 2020. According to the BPA (Biomass Power Association), the biomass industry produces 5 million megawatt-hours of electricity every year, provides 18,000 jobs nationwide, and removes more than 68.8 million tons of forest debris every year.

## **Future Market for Biomass**

As a result of these policies, global consumption of wood pellets has more than doubled in the years 2006-2011. Growing demand also exists in Asian countries like China, Korea and Japan. 3.1 Future Global Energy Demand The International Energy Agency (IEA) publishes annual World Energy Outlook report which includes projections and analysis on global energy use and demand. The IEA International Energy Agency uses three major scenarios: current policies, new policies, and 450. One can find further information on these scenarios on their reports. The “current policies” outlook is selfexplanatory and includes all formally adopted and implemented policies. “New policies” is based on the future adoption of actual policies based on current policy commitments (plotted below in Figure 13). The “450 Scenario” is a theoretical prediction based on keeping atmospheric CO<sub>2</sub> concentrations below 450ppm and restricting the average global temperature to a maximum of 2° C. Compared to 2008 levels, biomass consumption, which includes both liquid biofuels and wood pellets, is predicted to increase by at least 20% by 2020 and by greater than 40% by 2035.

Figure 13 - World Primary Energy Demand<sup>55</sup>



### Conference Highlights:

- Biomass to energy Industry
- Bio energy Processes
- Biomass Utilization
- Biomass and the Environment
- Advancement and technology
- Algal Biofuel Production
- Biomass and the World
- Biomass Conversion Processes to Useful Energy
- Biomass

### Major Biomass Research Associations around the Globe:

- American Biofuels Council
- Biomass Energy Research Association
- Canadian Renewable Fuels Association
- The International Biochar Initiative
- Vermont Biofuels Association

- Algae Biomass Association
- World Bioenergy Association
- Biomass Thermal Energy Council
- World council for Renewable Energy

### **Major Biomass Research Associations in UAE:**

- European Biomass Association
- Bioenergy West Midlands
- Biomass Energy Centre
- Renewable Energy Association
- Energy Research Centre
- European Bioenergy Research Institute
- Back Biomass Industry
- Marches Wood Energy Network Ltd